

**43<sup>RD</sup> ANNUAL ECC CONFERENCE**

engineering and construction contracting association



# **JOURNEY INTO UNCHARTED TERRITORIES**

September 7-10, 2011

JW Marriott Desert Ridge, Phoenix, AZ

How are owners, contractors and suppliers adapting to successfully execute projects and reposition their businesses in the ever evolving project environment?



**REPOSITIONING THE PROJECTS BUSINESS IN A WORLD WITH CHANGING BOUNDARIES**



# New Playing Fields - Game Changer for the Capital Projects Business

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**TOM  
BUTTS**  
CH2MHill



Program Co-Chair

## **JOURNEY INTO UNCHARTED TERRITORIES**

PLENARY SESSION 1



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**REPOSITIONING THE PROJECTS BUSINESS IN A WORLD WITH CHANGING BOUNDARIES**

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# ARS:

Are you currently involved in expanding your company's operations or introducing new products into new regions of the world?

1. Yes

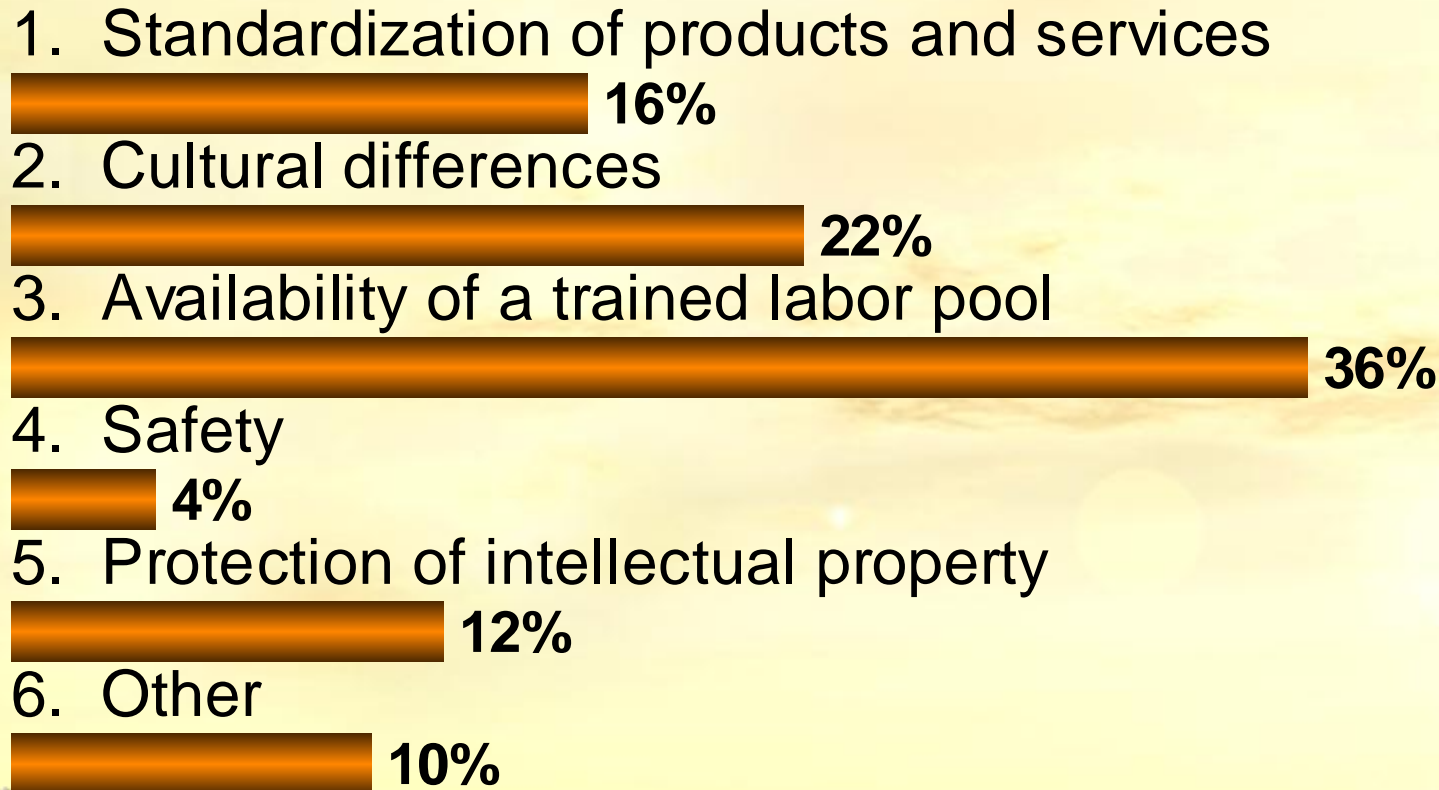


2. No



# ARS:

From the choices provided, what is your biggest challenge when expanding into new regions?





# Investing in Projects in Shifting Markets

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## **DR. VOLKER KNABE**

**President,  
Engineering &  
Maintenance,  
BASF SE**



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**PLENARY SESSION 1**



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# BASF - The Chemical Company

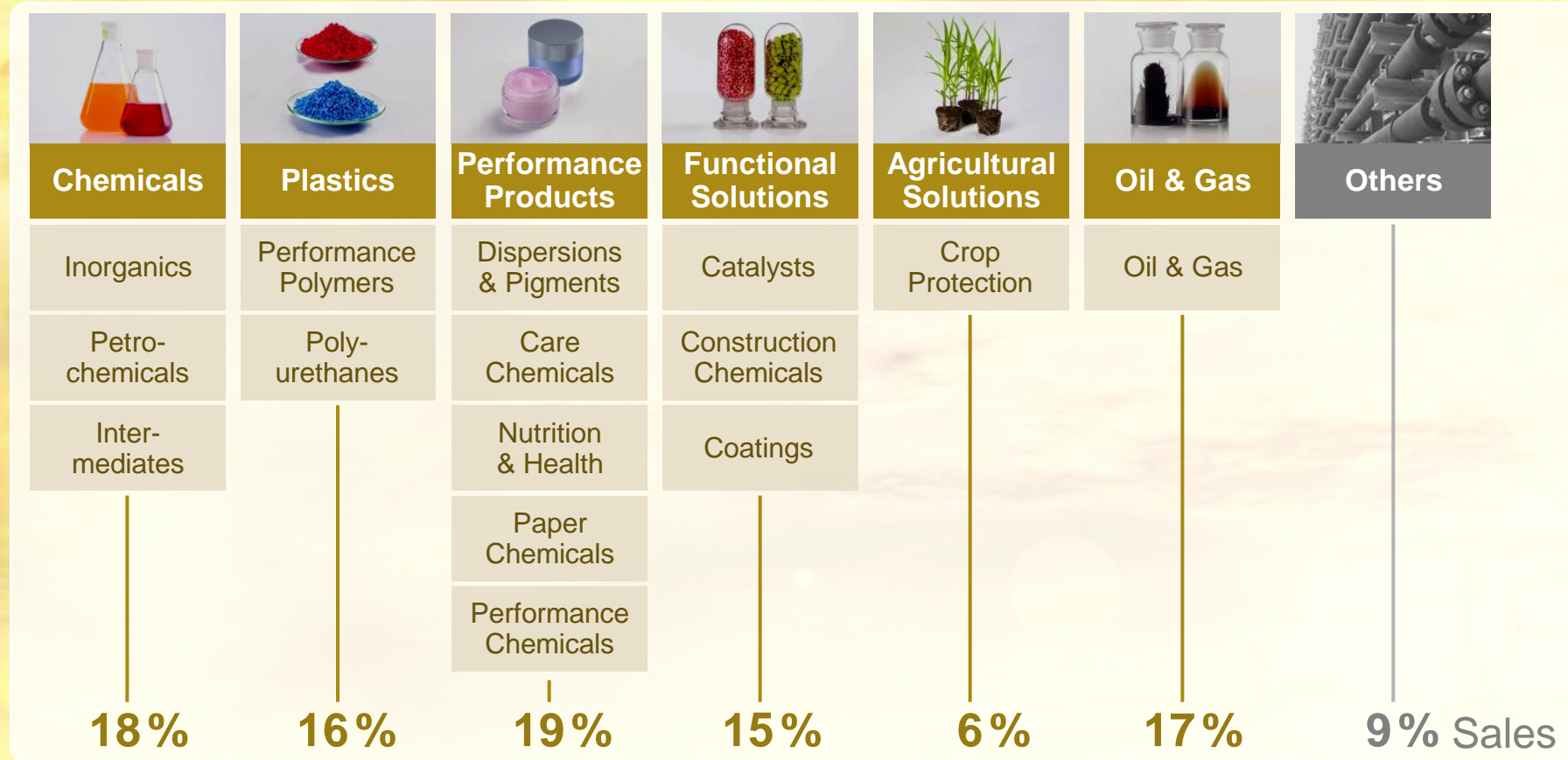
## The world's leading chemical company

- Our chemistry is used in nearly all industry sectors
- We combine economical success with social responsibility and the protection of the environment
- Sales 2010: €63,873 million
- EBIT 2010: €7,761 million
- Employees: 109,140 (December 31, 2010)
- Innovative strength:  
Leader in Patent Asset Index™  
(1,100 new patents filed)
- 6 Verbund sites and about 390 production sites





# BASF segments



# BASF's global technical community

**Replacement value ~ 60 billion €**

**2-3 billion € p.a. investments ...**

**1.7 billion € p.a. maintenance ...**

## **Know-how:**

- Worldwide unique engineering & maintenance network
- Global Technical Community: more than 13.500 employees worldwide
- Profound and broad technical know-how: 19 centers of technical expertise
- In house technological research and development
- Consulting and operational competence
- Third party business



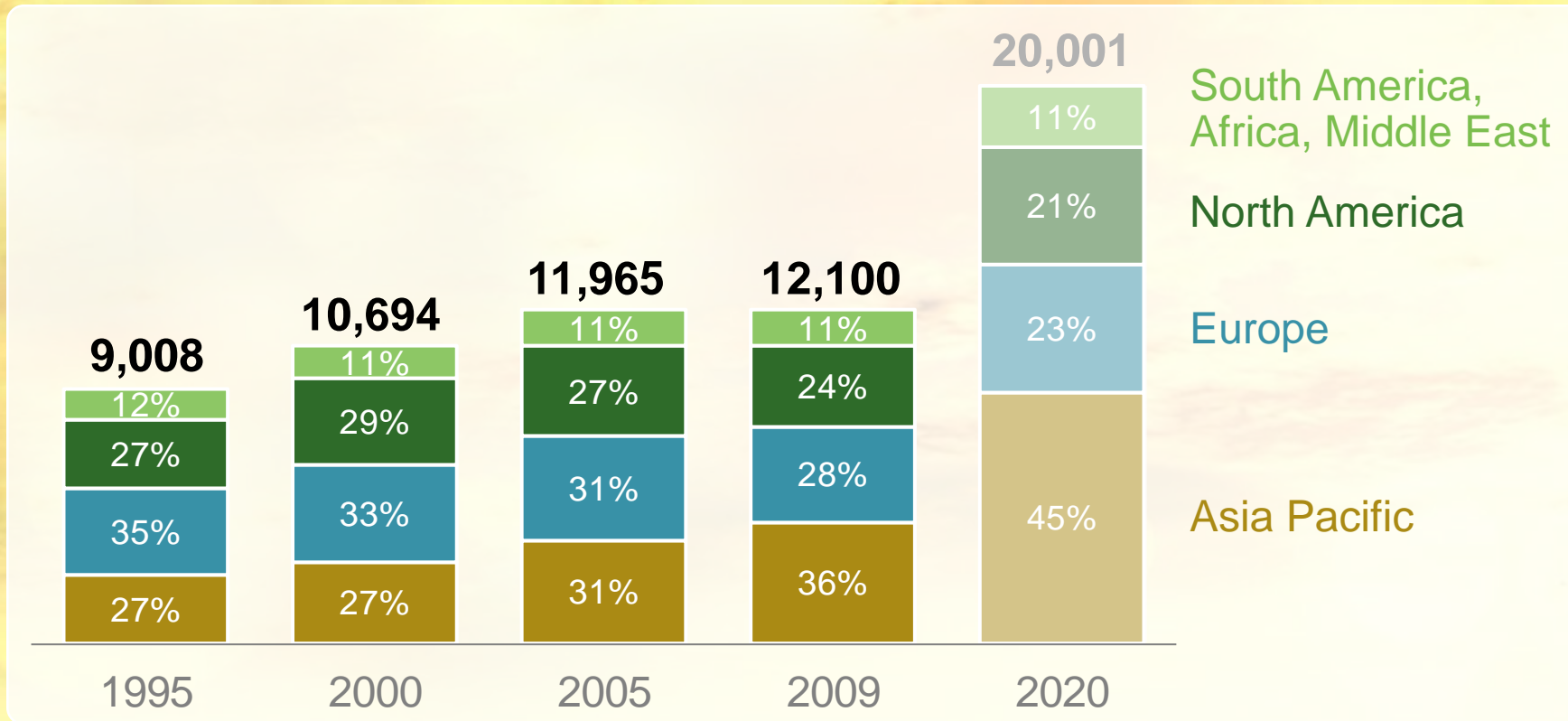


# Investment Projects in Shifting Markets: trends to be considered

- Customer industries still moving to the East but less pronounced
- Considerable differences in regional growth rates around the world
- Increased volatility in investment markets
- More mega projects to come but at the same time smaller “just in time” production modules needed
- More localization of engineering & procurement capabilities in Asia Pacific
- Current investment demand exceeds owner’s engineering capabilities
- Energy and climate change discussions impact investment decisions

# Shift of Customer Industries towards Asia ...

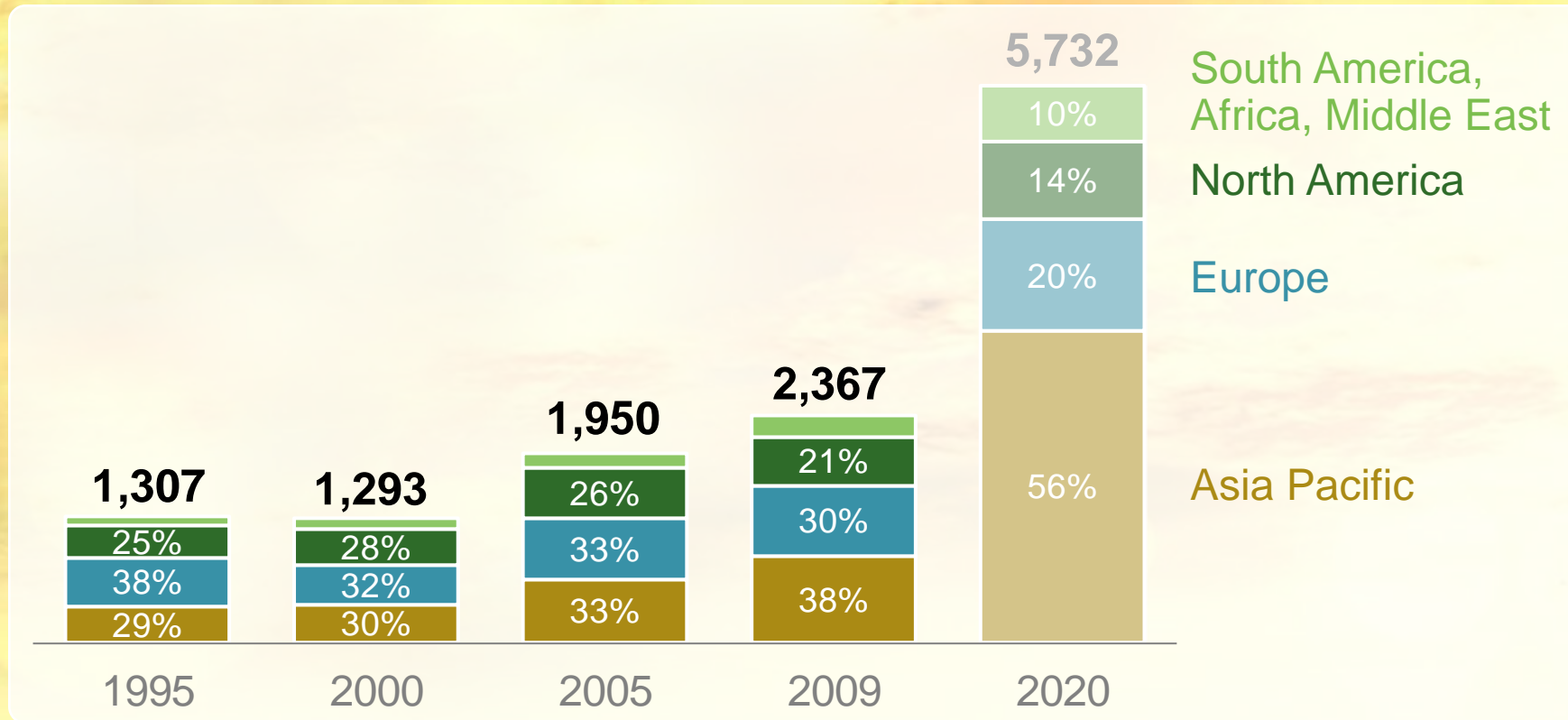
Gross Total Value Added / billion \$





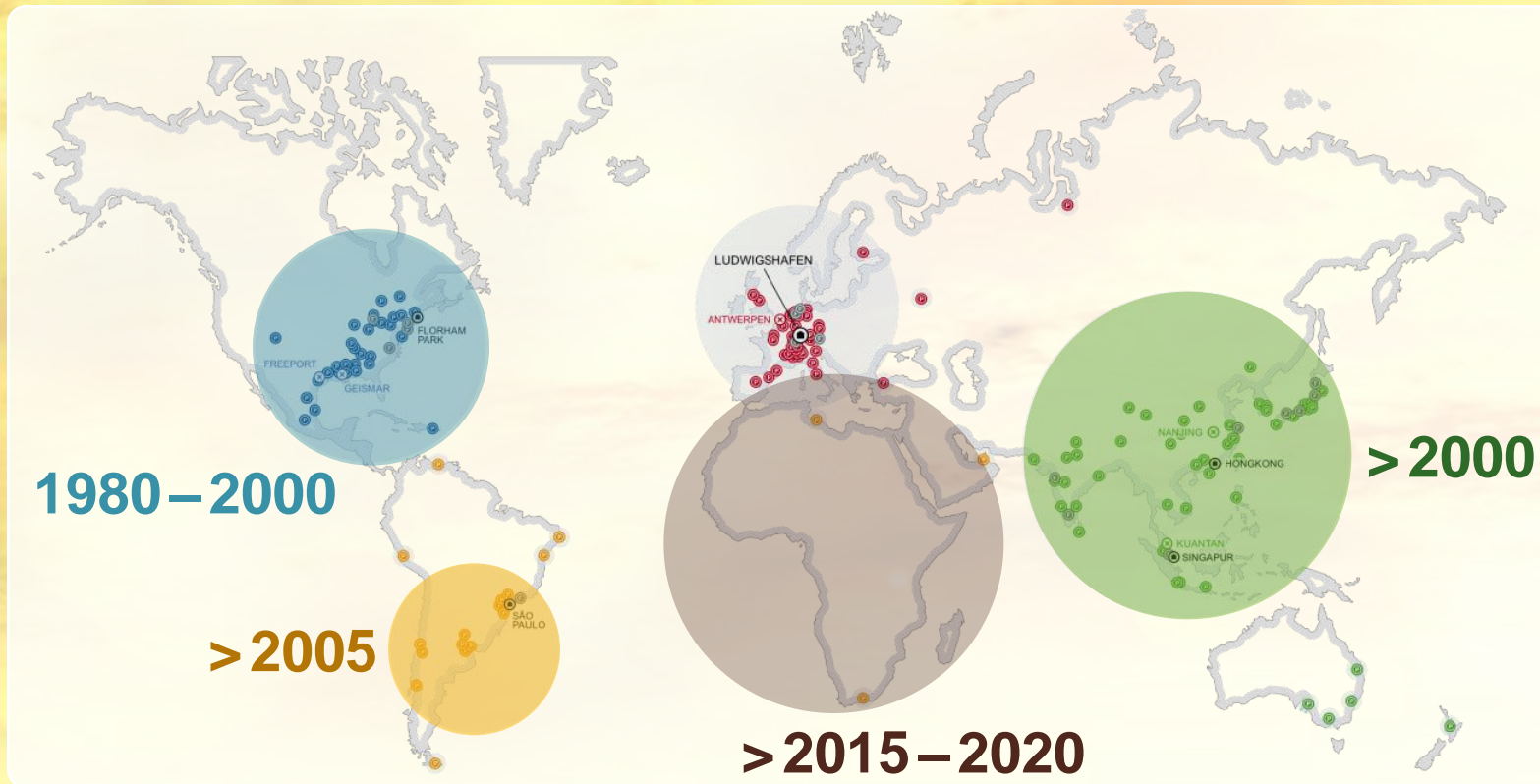
# ... and the chemical market follows

Total sales / billion \$



# Shifts in investment volume 1980 - 2020 ...

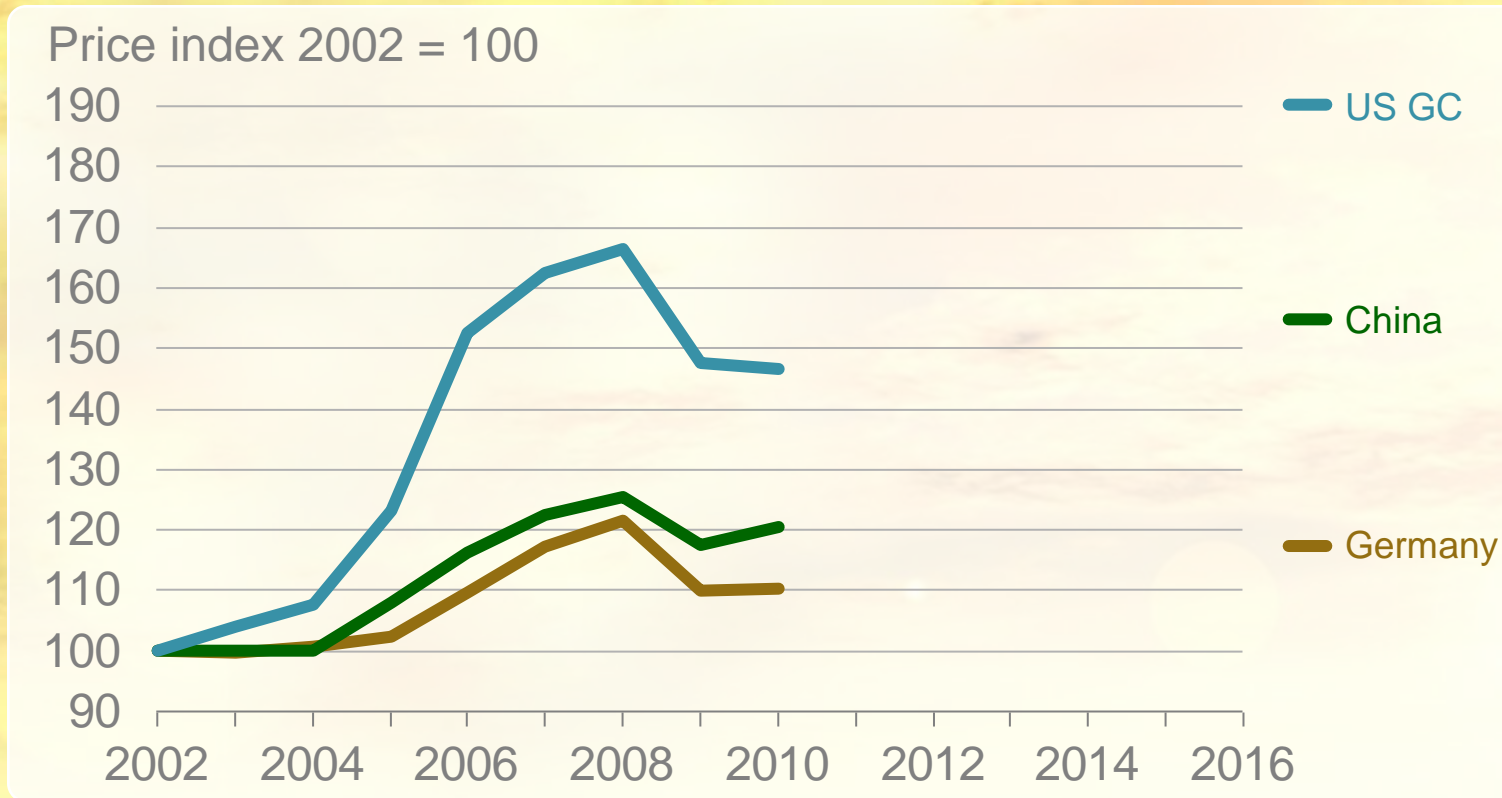
## Investment focus outside Europe at BASF





# Be prepared for more volatility in investment markets

**We still remember!**



# ARS:

Considering the current economic development and taking into account the depth crisis in certain regions as well as political unrest in e.g. North Africa, what are your expectations for the price index in the investment markets for the next five years to come?

1. No significant change compared to 2010/2011



2. Further price reductions like 2008/2009 due to early signals of recessions



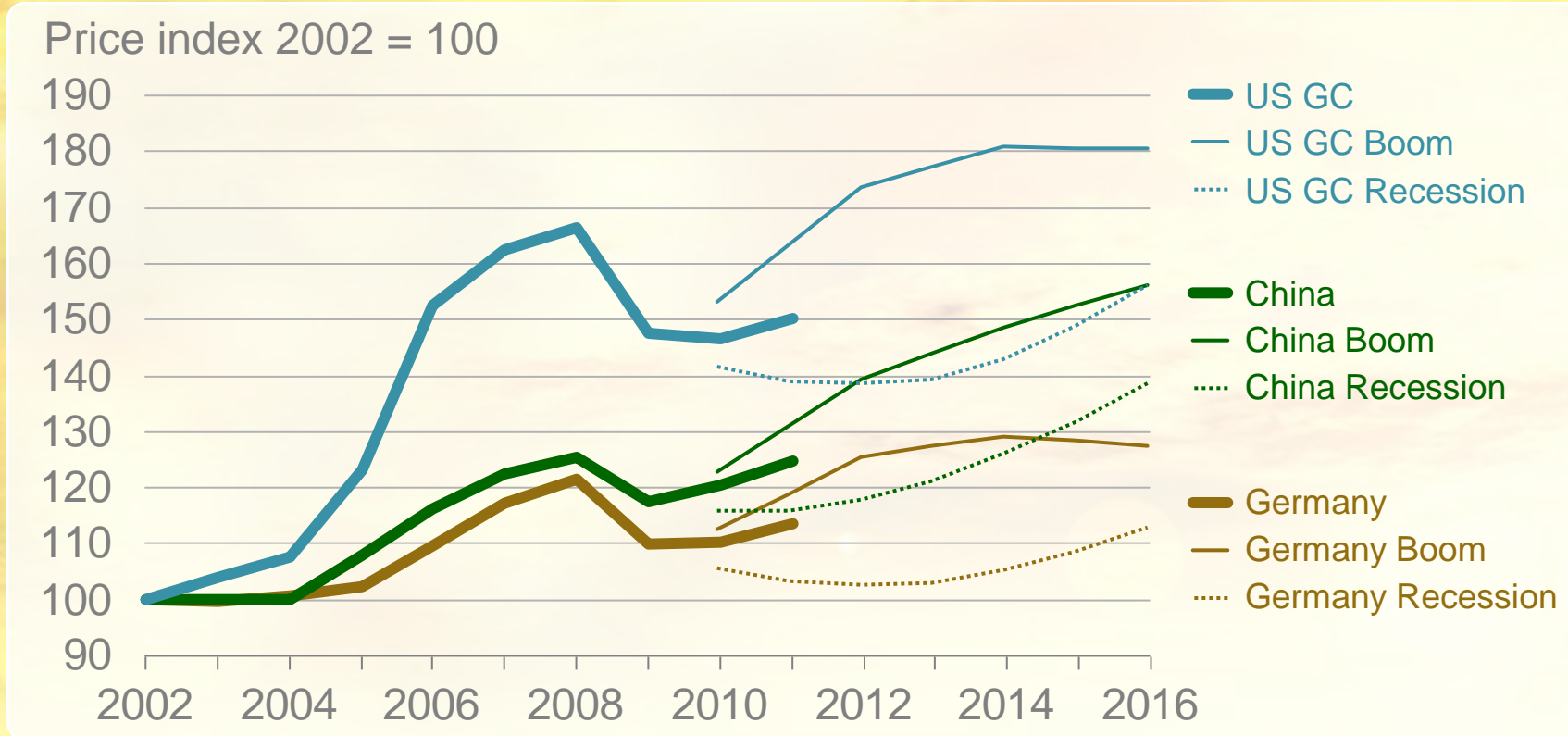
3. New boom in 2012 with high price increases, comparable to 2005/2006





# Be prepared for more volatility in investment markets

## What's ahead?



# More Mega Projects to come ...

## **e. g. continued trend in Middle East:**

- Countries have developed their “Visions”
- Limited window of opportunities; speed!
- Interest in downstream activities and access to markets outside of home region
- Balance between “discounts” and WTO restrictions



## **e.g. China:**

- “moving West”
- Growth rates demand world scale plants



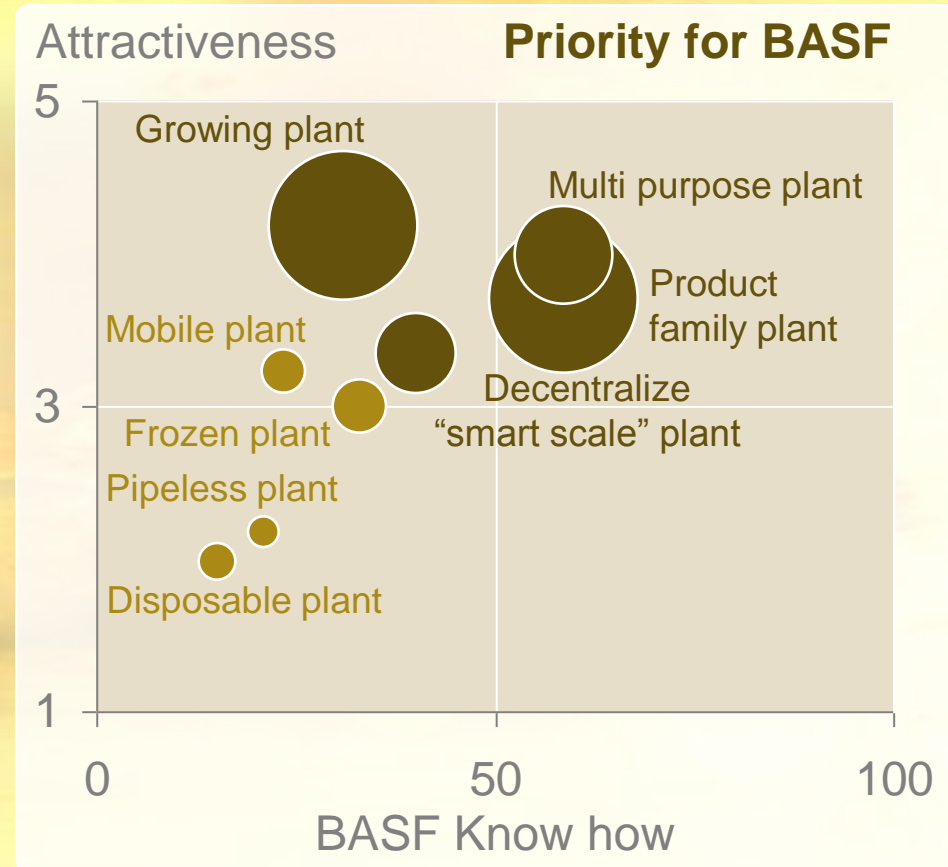
## **e.g. North America:**

- Shale gas exploration and downstream activities?



# ... but at the same time shift to new plant concepts

- New smaller markets to be developed
  - Trade restrictions
  - Desire for lower inventories
  - Shorter lifecycle time for specialty chemicals
- Need for new modularized plants at specific investment costs comparable to world scale plants



# Competitiveness of investments in emerging markets requires more localization - Example China (1/3)

- Most western companies are not fully exploiting the potential improvements in capital projects in China
- Many EPC contractors have build-up large offices with local people but they still do not think Chinese
- How do your projects compare to benchmarks like:

Type of plant	Average investment		Average time to finish project	
	USD/KW, USD/MT, USD millions/kbpd		Month	
Coal-fired power plant	Asia	500 - 1,000	33 - 65%	20 - 50%
	Developed market	1,450		
Petroleum refinery	Asia	8 - 15	15 - 60%	10 - 50%
	Developed market	18 - 20		



# Competitiveness of investments in emerging markets requires more localization - Example China (2/3)

Potentials to improve investment projects:

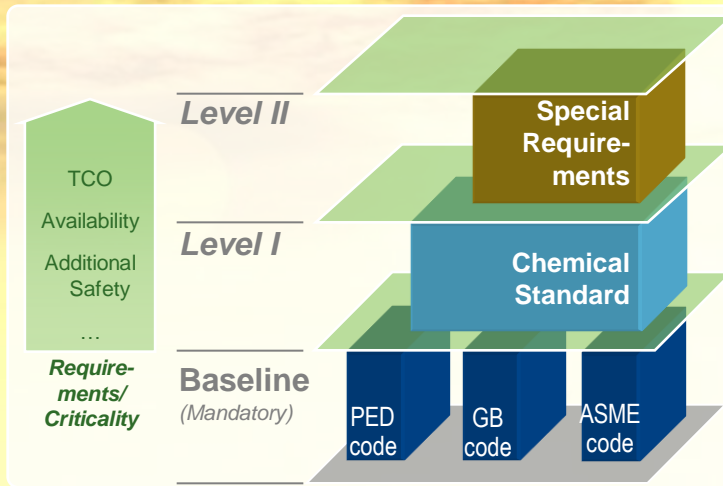
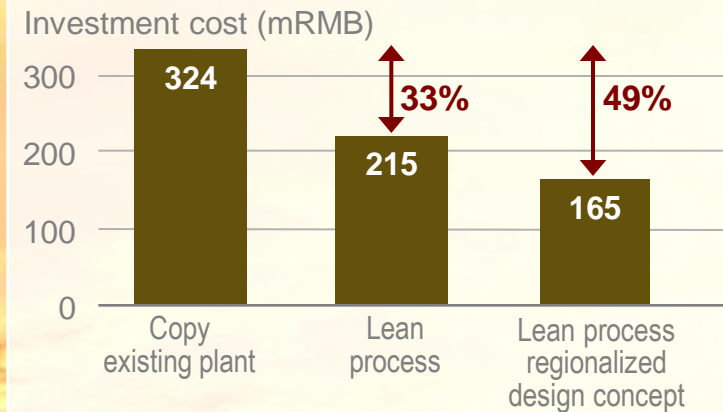
## Technology

- Adjust technologies to assure fit-for-purpose design and avoid over-specifications

## Procurement

- Local suppliers are encouraged to offer alternatives
- Development of local suppliers via partnerships
- Adapt specifications to local/supplier conditions (broader supplier base)
- Challenge restricted vendor lists

### Example for investment in China (study)

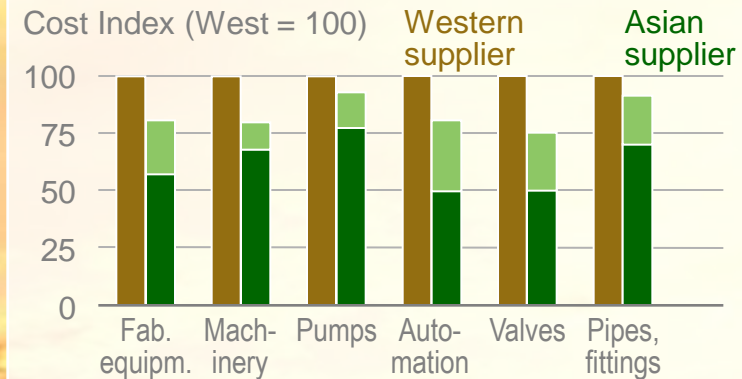




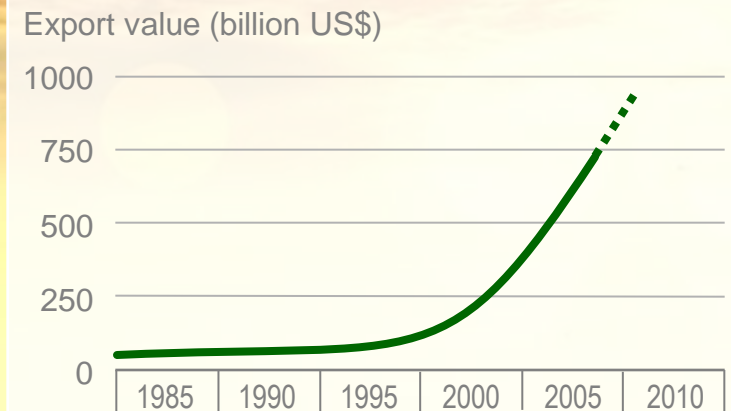
# Competitiveness of investments in emerging markets requires more localization - Example China (3/3)

- Maximize saving potentials from Asian equipment market for projects in Asia and outside
- Early transfer of planning activities to Asia to apply localized plant design concepts
- Increase use of Asian engineering resources

Cost difference for equipment, ex works



Machines & Equipment exports from China



# Shift in project load: From crisis to investment wave

## Industry trend

- Backlog of investment projects due to financial crisis and under estimated recovery

## Investment activities



# Challenges for EPC Contractors and Suppliers

- More focus on process engineering / conceptional planning support via engineering partnership
- Push for increased local content; a “must” for owner’s as well
- Sufficient presence in fast growing markets (incl. required licenses) and enhanced global reach
- Differentiation by sophisticated market intelligence (sourcing)
- Advanced IP protection strategy





# Shift in energy policy/climate change triggers new pattern of competition between regional/global sites

## Energy

- Current uncertainty of long term power supply / pricing for process industries and their related customers, e.g.
  - phasing out of nuclear energy,
  - expansion in renewable energy,
  - climate change consequences



## Emission Trading e. g. Europe

- Advantages for production sites outside of trading zones
- Energy efficient technologies get a new push



# Summary

- Continued focus on developing markets in Asia Pacific
- Expect more to come from Middle East
- Localization of resources is a prerequisite for fully capitalizing potentials in Asia/Pacific
- Current capital projects forecast provides new opportunities for EPC companies/suppliers but bears the risk of volatile investment markets
- Energy and climate change discussions are to be closely watched

# Q & A

It's up for discussion!

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